UNITED STATES PATENT AND TRADEMARK OFFICE

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09/740,040	12/20/2000	James M. Zombek	003636.0100	6195

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 October 2009*.

2a)☒ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-54* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *2/2/10*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

This action is responsive to the amendment filed on May 5, 2009. Claims 1, 48, and 55 were amended. Claims 1 and 3-61 are pending.

Response to Amendment

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.   Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3.   Claim 1 recites the limitation "said messages" in the third limitation. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1, 3-10, 15, and 17-54 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Dunlop et al., U.S. Patent No. 6,721,872, further in view of Schuster

et al., U.S. Patent No. 6,785,261.

        As to claims 1 and 48, Dunlop teaches a messaging system, messaging method,

comprising:

        a client device (col. 2, lines 39-41, col. 3, lines 22-26);

        a server (col. 2, lines 39-41, col. 3, lines 22-26);

        a protocol gateway adaptively arranged between at least two of a plurality of

communication networks each communicating said messages between said client

device and said server with a plurality of differing wireless network protocols, said

protocol gateway communicated with an underlying wireless network protocol (col. 3,

lines 14-34, col. 4, lines 5-21, Dunlop teaches the use of a reconfigurable network

interface architecture including a device to support/encapsulate multiple network

operating protocols, wireless LAN, and an OSI protocol stack).

        Dunlop fails to teach the limitation further including segmenting a message

communicated into multiple segments and encapsulating said multiple segments with a

connectionless protocol header providing Transmission Control Protocol (TCP)

functionality to said multiple segments.

        However, Schuster teaches a method and apparatus for facilitating correction of

data loss in a data transmission system (see abstract). Schuster teaches a message

divided into data packets and those packets including a packet/protocol header that

encapsulates them; the encapsulation and segmentation providing TCP functionality

(col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Dunlop in view of Schuster to segment a message communicated

into multiple segments and encapsulating said multiple segments with a connectionless

protocol header providing Transmission Control Protocol (TCP) functionality to said

multiple segments. One would be motivated to do so because it minimizes transmission

latency.

Regarding claims 3 and 50, Dunlop teaches the messaging system and method

according to claims 1 and 48, wherein said underlying wireless network protocol is

comprised of a protocol stack that comprises:

an application layer mapped to layer 7 of said OSI model;

a network layer mapped to layer 3 of said OSI model;

a data link layer mapped to layer 2 of said OSI model; and

a physical layer mapped to layer 1 of said OSI model (col. 4, lines 5-21, Dunlop

discloses a protocol stack of layers used).

Regarding claims 4, 41, and 51, Dunlop teaches the messaging system and

method according to claims 3, 23, and 50, wherein:

said application layer comprises an interface between a client application and a

simple network transport layer (SNTL); and

said client application is adapted to send and receive messages across said

plurality of wireless networks without having any information of a communication

implementation (col. 4, lines 5-21, col. 5, line 60 – col. 6, line 10).

Regarding claims 5, and 52, Dunlop teaches the messaging system and method

according to claims 4, and 41, wherein:

said client application is selected from a group consisting of one or more e-mail

applications, one or more file transfer applications, and a plurality of end user

applications (Dunlop, col. 4, lines 5-21, col. 5, line 60 – col. 6, line 10; Schuster, col. 15,

lines 36-43).

Regarding claims 6, and 53, Dunlop teaches the messaging system and method

according to claims 4, and 50, wherein:

said network layer comprises means for providing network protocol layer

functionality and hiding the details of said functionality from a simple network transport

layer (SNTL) (col. 4, lines 5-21).

Regarding claims 7, and 54, Dunlop teaches the messaging system and method

according to claims 6, and 53, wherein:

said network layer comprises an Internet Protocol (IP) (col. 4, lines 5-21).

Regarding claim 8, Dunlop teaches the messaging system according to claim 3, wherein:

said data link layer and said physical layer are together adapted to comply with a public switch telephone network protocol (col. 3, lines 14-34, col. 4, lines 5-21).

Regarding claim 9, Dunlop teaches the messaging system according to claim 3, wherein:

said data link layer and said physical layer are together adapted to comply with a cellular digital packet data protocol (col. 3, lines 14-34, col. 4, lines 5-21).

Regarding claim 10, Dunlop teaches the messaging system according to claim 3, wherein:

said data link layer and said physical layer are together adapted to comply with a Mobitex protocol (col. 3, lines 14-34, col. 4, lines 5-21).

Regarding claim 15, Dunlop teaches the messaging system according to claim 3, wherein:

said data link layer and said physical layer are adapted to comply with said selected wireless network protocol (col. 3, lines 14-34, col. 4, lines 5-21).

Regarding claim 17, Dunlop teaches the messaging system according to claim 4, wherein:

said SNTL includes a connectionless UDP-like transport protocol having

substantially all features and advantages of TCP (Schuster, col. 1 line 63 – col. 2, line 7,

col. 2, lines 49-65).

Regarding claim 18, Dunlop teaches the messaging system according to claim

17, wherein:

said features are selected from a group comprising message segmentation,

message segment reassembly, message retries, and message duplication (Schuster,

col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 19, Dunlop teaches the messaging system according to claim

17, wherein:

said SNTL includes a transport header having a preselected width (Schuster, col.

1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 20, Dunlop teaches the messaging system according to claim

19, wherein:

said preselected width comprises between four to six bytes (Schuster, col. 1 line

63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 21, Dunlop teaches the messaging system according to claim

19, further comprising:

a single segment message header (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 22, Dunlop teaches the messaging system according to claim 19, further comprising:

a multiple segment message header (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 23, Dunlop teaches the messaging system according to claim 19, wherein said transport header further comprises:

a first field adapted to indicate a version number of a segment header;

a second field adapted to indicate a message identification value, adapted to discard segment/message duplications and to match acknowledgments with messages;

a third field adapted to indicate protocol information;

a fourth field adapted to indicate a total number of bytes contained in a message segment to be sent including said segment header; and

a fifth field adapted to indicate a number of each said message segment (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 24, Dunlop teaches the messaging system according to claim 23, wherein:

said first field comprises two bits (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 25, Dunlop teaches the messaging system according to claim 23, wherein:

said first field comprises bit 0 and bit 1 of a first word in said segment header (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 26, Dunlop teaches the messaging system according to claim 23, wherein:

said first field comprises a value of from 0 to 3 (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 27, Dunlop teaches the messaging system according to claim 23, wherein:

said second field comprises thirteen bits (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 28, Dunlop teaches the messaging system according to claim 23, wherein:

said second field comprises bits 2 through 14 of a first word in said segment header (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 29, Dunlop teaches the messaging system according to claim

23, wherein:

said second field comprises a value of from 0 to 8,192 (Schuster, col. 1 line 63 –

col. 2, line 7, col. 2, lines 49-65).

Regarding claim 30, Dunlop teaches the messaging system according to claim

23, wherein:

said third field comprises five bits (Schuster, col. 1 line 63 – col. 2, line 7, col. 2,

lines 49-65).

Regarding claim 31, Dunlop teaches the messaging system according to claim

23, wherein:

said third field comprises bits 15 through 19 of a first word in said segment

header (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 32, Dunlop teaches the messaging system according to claim

23, wherein:

bit 19 of said third field comprises a value indicative of message segmentation

(Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 33, Dunlop teaches the messaging system according to claim 32, wherein:

bit 19 comprises a value of 0 when said message is not segmented (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 34, Dunlop teaches the messaging system according to claim 32, wherein:

bit 19 comprises a value of 1 when said message is segmented (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 35, Dunlop teaches the messaging system according to claim 23, wherein:

bit 16 of said third field comprises a value indicative of a message type (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 36, Dunlop teaches the messaging system according to claim 35, wherein:

bit 16 comprises a value of 0 when said message includes a positive acknowledgment (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 37, Dunlop teaches the messaging system according to claim 35, wherein:

bit 16 comprises a value of 1 when said message includes a negative

acknowledgment (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 38, Dunlop teaches the messaging system according to claim

23, wherein:

bit 15 of said third field comprises a message indicator (Schuster, col. 1 line 63 –

col. 2, line 7, col. 2, lines 49-65).

Regarding claim 39, Dunlop teaches the messaging system according to claim

38, wherein:

bit 15 comprises a value of 0 when said message is an application message

(Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 40, Dunlop teaches the messaging system according to claim

38, wherein:

bit 15 comprises a value of 1 when said message is a system message

(Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 41, Dunlop teaches the messaging system according to claim

23, wherein:

said fourth field comprises twelve bits (Schuster, col. 1 line 63 – col. 2, line 7, col.

2, lines 49-65).

Regarding claim 42, Dunlop teaches the messaging system according to claim 41, wherein:

said fourth field comprises bits 20 through 31 of a second word in said segment header (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 43, Dunlop teaches the messaging system according to claim 42, wherein:

said fourth field comprises a value of from 4 to 4,096 (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 44, Dunlop teaches the messaging system according to claim 23, wherein:

said fifth field comprises eight bits (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 45, Dunlop teaches the messaging system according to claim 44, wherein:

said fifth field comprises bits 0 through 7 of a third word in said segment header (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claim 46, Dunlop teaches the messaging system according to claim

44, wherein:

said fifth field comprises a value of from 2 to 255 (Schuster, col. 1 line 63 – col. 2,

line 7, col. 2, lines 49-65).

Regarding claim 47, Dunlop teaches the messaging system according to claim

23, wherein:

said fifth field is adapted to re-order a plurality of message segments into a single

complete message (Schuster, col. 1 line 63 – col. 2, line 7, col. 2, lines 49-65).

Regarding claims 49, and 56, Dunlop teaches the messaging system and

method according to claims 48, and 55, wherein:

a simple network transport layer (SNTL) that maps to layer 4 of said OSI model

(col. 3, lines 14-34, col. 4, lines 5-21).

6.   Claims 11-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Dunlop and Schuster further in view of Meyer et al., U.S. Patent No. 6,778,099.

As to claim 11, Dunlop and Schuster teach the method of claim 3.

Dunlop and Schuster fail to teach the limitation further including wherein said

data link layer and said physical layer are together adapted to comply with a RIM

protocol.

However, Meyer teaches automatic equipment and systems for remote reading of utility meters via a wireless area network communications module (see abstract). Meyer teaches the use of a RIM protocol (col. 6, lines 17-20).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Dunlop and Schuster in view of Meyer to use a RIM protocol. One would be motivated to do so because it allows for the use of more protocols to transfer data.

As to claim 12, Dunlop and Schuster teach the method of claim 3.

Dunlop and Schuster fail to teach the limitation further including wherein said data link layer and said physical layer are together adapted to comply with an ARDIS protocol.

However, Meyer teaches the use of an ARDIS protocol (col. 6, lines 1-5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Dunlop and Schuster in view of Meyer to use an ARDIS protocol.

As to claim 13, Dunlop and Schuster teach the method of claim 3.

Dunlop and Schuster fail to teach the limitation further including wherein said data link layer and said physical layer are adapted to comply with a GPRS protocol.

However, Meyer teaches the use of other packet wireless data networks and packets transmitted and received over a radio modem (col. 6, lines 1-5, col. 7, lines 21-26).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Dunlop and Schuster in view of Meyer to use a GPRS protocol.

As to claim 14, Dunlop and Schuster teach the method of claim 3.

Dunlop and Schuster fail to teach the limitation further including wherein said data link layer and said physical layer are adapted to comply with a GSM protocol.

However, Meyer teaches the use of a GSM protocol (col. 6, lines 1-5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Dunlop and Schuster in view of Meyer to use a GSM protocol.

As to claim 16, Dunlop and Schuster teach the method of claim 3.

Dunlop and Schuster fail to teach the limitation further including an ARDIS protocol, a RIM protocol, a GPRS protocol, and a GSM protocol.

However, Meyer teaches the use of an ARDIS protocol, a RIM protocol, a GPRS protocol, and a GSM protocol (col. 6, lines 1-5, 17-20; col. 7, lines 21-26).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Dunlop and Schuster in view of Meyer to use an ARDIS protocol, a RIM protocol, a GPRS protocol, and a GSM protocol.

Response to Arguments

7.   Applicant's arguments with respect to claims 1 and 3-54 have been considered but are moot in view of the new ground(s) of rejection.   The Gleeson reference is no longer used in the rejection.

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,304,564 to Monin et al.

U.S. Pat. No. 6,718,384 to Linzy

U.S. Pat. No. 6,628,965 to LaRosa et al.

U.S. Pat. No. 6,721,779 to Maffeis

U.S. Pat. No. 6,874,018 to Wu

U.S. Pat. No. 5,970,059 to Ahopelto et al.

U.S. Pat. No. 5,673,322 to Pepe et al.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to AVI GOLD whose telephone number is (571)272-4002.

The examiner can normally be reached on M-F 8:30 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/A. G./   /ARIO ETIENNE/
Examiner, Art Unit 2457   Supervisory Patent Examiner, Art
                                                                          Unit 2457